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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/452,802	12/02/1999	DINESH KASHINATH ANVEKAR	YO999-540	1773

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EXAMINER

BAYARD, EMMANUEL

ART UNIT PAPER NUMBER

2631

DATE MAILED: 03/26/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/452,802

Applicant(s)

ANVEKAR ET AL.

Examiner

Emmanuel Bayard

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 8-11 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 12 and 14 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to amendment filed on 1/12/04 in which claim 1-3, 5-12 and 14 are pending and claims 4 and 13 are canceled. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371⁹ of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, 5 and 12, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Wakayama et al U.S. Patent No 6,212,221 B1.

As per claim 1, Wakayama et al discloses a frequency hopping time division duplex indoor wireless communication system comprising: a master unit (see figs. 1a, 2 elements 1 and col.8, lines 6-26) having a CPU (see fig. 1a element 10 and col.8, lines 26-51) is functionally equivalent to the claimed (processor) and a first frequency selection unit (see abstract and col.3,

Art Unit: 2631

lines 9-55 and col.4, lines 9-26 and col.19, lines 20-35, 65-67 and col.20, lines 1-25) for finding a current frequency on which to transmit and receive during the current time slot and at least a second frequency selection unit (see abstract and col.3, lines 9-55 and col.4, lines 9-26 and col.19, lines 20-35, 65-67 and col.20, lines 1-25) interfaced with said processor (10) to select frequencies to be used in future time slots; and a plurality of slave units are functionally equivalent to the claimed (mobile stations) (see fig.2 elements 20a-20d) communicating with said master unit (element 1).

As per claim 2, the time division duplex of Wakayama et al includes logic units to perform frequency hop selection (see col.2, lines 4-5 and col.5, lines 20-25) according to predetermined standards.

As per claim 3, the time division duplex of Wakayama et al inherently includes providing binary information about a Pico-cell related address bits and clock bits corresponding to the time slot.

As per claims 5 and 12, Wakayama et al discloses a frequency hopping indoor wireless communication system comprising: a master unit (see figs. 1a, 2 element 1 and col.8, lines 6-26) and a plurality of slave units (see fig.2 elements 20a-20d); said master unit (1) having a plurality of link state counters $C(i,j)$ (see fig.3 elements 34, 35 and col.9, lines 10-20), wherein the states of wireless link between the master unit and a slave unit are recorded in link state counters provided one for each frequency of communication f_l between the master and the slave "I" (see col.9, line 13 and col.10, line 40).

As per claim 14, the time division duplex of Wakayama et al inherently includes an expected state of wireless links with reference to interference.

Allowable Subject Matter

Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8-11 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter: the present invention teaches a frequency hopping time division duplex communication system. The prior art of Wakayama et al teaches a similar frequency hopping communication system. However the above prior arts fail to anticipate or render obvious the recited features: the counter is reset to zero when a current transmission/reception with reference to slave unit on frequency is successful or when the count value exceed exceeds a reset threshold T as recited in claim 6. If the link state history counter values of all active slave units are above a threshold T, the master unit chooses a slave unit whose link state history counter has a lowest value, and decides on a packet size of one as recited in claim 8. If all frequencies corresponding different allowed packet sizes are such that the corresponding link state history counter values are above the threshold T, the master unit proceeds to choose another slave unit for transmission as recited in claim 9. The master unit constructs a link state history table of counters after receiving values of goodness counters from all the slave units and uses this information during a next scheduling period as recited in claim 10.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ali et al U.S. Patent No 5,588,005 teaches a protocol and mechanism for primary and mutter mode.

Weissman et al U.S. Patent No 6,501,942 B1 teaches In-building radio frequency.

Van der Tuijn et al U.S. Patent No 6,683,886 B1 teaches bluetooth communication units.

Haartsen et al U.S. Patent No 6,570,857 B1 teaches a central multiple accesses.

Simmering U.S. Patent No 5,455,959 teaches a system for collecting from masters.

Tambara et al U.S. patent No 6,484,268 B2 teaches a signal transmission.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 703 308-9573. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 703 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

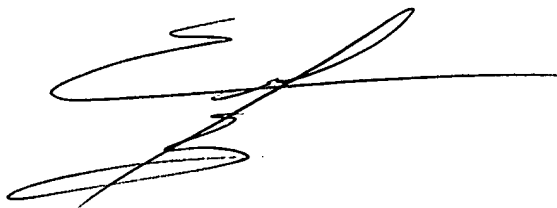
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/452,802
Art Unit: 2631

Page 6

Emmanuel Bayard
Primary Examiner
Art Unit 2631

Friday, March 19, 2004

A handwritten signature in black ink, consisting of a large, stylized 'E' followed by a horizontal line and a diagonal stroke.